

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently amended) A machine-readable medium storing computer-executable instructions to perform a method of estimating a life of a product, the method comprising:

determining accelerated stress testing data for the product using the relationship  $t_F = AF \times t_A^2$ , where  $t_F$  = a failure time on a field use time scale,  $AF$  = an acceleration factor, and  $t_A$  = failure time on an accelerated time scale, the accelerated stress testing data representing the response of the product operating in a first environment; and

calculating the mean-time-between-failures (MTBF) for the product operating in a second environment based on the accelerated stress testing data.

2. (Previously presented) The machine-readable medium of claim 1, wherein said first environment is more likely than the second environment to cause the product to fail.
3. (Previously presented) The machine-readable medium of claim 1, wherein the accelerated stress testing data represents the length of time the product operates in the first environment before the product fails.
4. (Previously presented) The machine-readable medium of claim 1, wherein the accelerated stress testing data is derived from a plurality of different stress tests.
5. (Previously presented) The machine-readable medium of claim 4, wherein the plurality of different stress tests includes a temperature test and a vibrational test.

6. (Previously presented) The machine-readable medium of claim 1, the method further comprising calculating upper and lower confidence limits for the MTBF calculation.
7. (Previously presented) The machine-readable medium of claim 1, wherein said accelerated stress testing data is determined at least in part from bill of materials (BOM) information on the product.
8. (Previously presented) The machine-readable medium of claim 1, wherein said step of calculating is performed during the design of the product.
9. (Previously presented) The machine-readable medium of claim 1, wherein said step of calculating is performed prior to manufacturing the product for commercial use.
10. (Canceled)
11. (Currently amended) The machine-readable medium of claim 1, wherein the accelerated stress testing data includes accelerated stress testing data for a previous design of the product.
12. (Previously presented) The machine-readable medium of claim 11, wherein the accelerated stress testing data for the previous design of the product is derived from stress testing in an environment less likely to cause failure than said first environment.
13. (Previously presented) The machine-readable medium of claim 11, the method further comprising calculating a change in MTBF from the previous design of the product.
14. (Previously presented) The machine-readable medium of claim 11, wherein said step of calculating includes using the relationship  $\text{EXP} [1/k \sum_{i=1}^k \ln(t_2^2 / t_1^2)]$ ; and wherein  $t_1$  = time to first failure during accelerated stress testing for previous

design of the product, and  $t_2$  = time to first failure during accelerated stress testing for the product.

15. (Previously presented) The machine-readable medium of claim 11, the method further comprising calculating a factor increase or decrease in the life of the product as compared to the life of the previous design of the product.
16. (Previously presented) The machine-readable medium of claim 11, wherein the accelerated stress testing data is derived from a plurality of different stress tests.
17. (Previously presented) The machine-readable medium of claim 16, wherein the different stress tests include a temperature test and a vibrational test.
18. (Previously presented) The machine-readable medium of claim 11, wherein said step of calculating is performed during the design of the product.
19. (Previously presented) The machine-readable medium of claim 11, wherein said step of calculating is performed prior to manufacturing the product for commercial use.
20. (Canceled)
21. (Currently amended) A machine-readable medium storing computer-executable instructions to perform a method of estimating a life of a product, the method comprising:

determining accelerated stress testing data for the product using the relationship  $t_F = AF \times t_A^2$ , where  $t_F$  = a failure time on a field use time scale,  $AF$  = an acceleration factor, and  $t_A$  = failure time on an accelerated time scale, the accelerated stress testing data representing the response of the product operating in a first environment; and

calculating the mean-time-between-failures (MTBF) for the product operating in a second environment based on the accelerated stress testing data,

wherein said first environment is more likely than the second environment to cause the product to fail; and

wherein the accelerated stress testing data is derived from a plurality of different stress tests.

22. (Currently amended) A machine-readable medium storing computer-executable instructions to perform a method of estimating a life of a product, the method comprising:

determining accelerated stress testing data for the product using the relationship  $t_F = AF \times t_A^2$ , where  $t_F$  = a failure time on a field use time scale,  $AF$  = an acceleration factor, and  $t_A$  = failure time on an accelerated time scale, the accelerated stress testing data representing the response of the product operating in a first environment; and

calculating the mean-time-between-failures (MTBF) for the product operating in a second environment based on the accelerated stress testing data,

wherein said first environment is more likely than the second environment to cause the product to fail; and

wherein said accelerated stress testing data is determined at least in part from bill of materials (BOM) information on the product.